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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/820,562

Applicant(s)

BRAUN ET AL.

Examiner

Randall Chin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 and 29-106 is/are pending in the application.  
4a) Of the above claim(s) 34 and 85-95 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-27, 29-33, 35-84 and 96-106 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11132006; 05042007.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Upon further consideration and in view of newly added claims 37-106, and for matters of consistency and completeness, an election of species is being made in the instant application, which is set forth below, which is similar to the election of species requirement (1/29/2002) in parent application 09/526,679.

#### ***Election/Restrictions***

2. This application contains claims directed to the following patentably distinct species **1) Figs. 2, 3 and 2) Figs. 4, 5.**

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

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**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.**

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

3. If applicant newly presents claims in the reissue to subject matter drawn to an invention patentably distinct from the invention claimed in the patent, 37 CFR 1.176 now permits the examiner to make a requirement for restriction. **Where a restriction requirement is made, the original patent claims will be held to be constructively elected, and the examiner will issue an Office action on the merits providing notification of the restriction requirement in such Office action. The examiner should hold the original patent claims to be constructively elected, unless a disclaimer of all the patent claims is filed in the reissue application, which disclaimer cannot be withdrawn by the applicant. Thus, the examiner should issue an Office action (1) providing notification of the restriction requirement, (2) holding the added claims that are drawn to a patentably distinct invention to be constructively non-elected and withdrawn from consideration, and (3) treating the original patent claims on the merits. See MPEP 1450.**

The criteria for making a restriction requirement in a reissue application between claims added to the patent (in the reissue application) and original patent claims is the same as that applied in a non-reissue application. See MPEP 806 through 806.05(i).

The original patent claims (which have been constructively elected) will receive a complete examination on their merits, while the nonelected (added) claims directed to the added invention(s) will be held in abeyance as withdrawn from consideration. The original claims cannot be issued in the first reissue application **as unamended**, unless there is an appropriate reissue error identified in the oath/declaration not directed to the claims (e.g., failure to perfect § 119 priority), since they the original claims do not correct any error in the original patent (by themselves). If the original patent claims have been amended (in order to correct an error in the original patent which has been properly identified in the reissue declaration), and have been found allowable, they may be passed to issue in the first reissue which does not contain any new claims.

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4. Accordingly, in view of the above election requirement, the original patent claims, namely Figs. 2, 3, are deemed to be constructively elected. Accordingly, Figs. 4, 5 are non-elected and drawn to a tooth cleaning element with a living hinge. Accordingly, claims 34 and 85 (as well as dependent claims 86-94 and independent claim 95) have all been withdrawn from consideration. More specifically, claim 85 sets forth subject matter drawn to an invention which is patentably distinct from the invention claimed in the patent.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 63-74 and 96-106 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 63 recites a top surface having a first aperture, **a second aperture opposite the first aperture**, a socket, and **wherein the second aperture is covered by a piece that forms a bottom surface of the head that is opposite the top**

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**surface of the head** (emphasis added), all not disclosed as originally filed, and therefore constitutes new matter. Accordingly, being dependent on independent claim 63, all of claims 64-73 include new matter.

Accordingly, independent claim 74 reciting a toothbrush head, comprising the toothbrush head of claim 63 also constitutes new matter.

Claim 96 recites a top surface with a first aperture **and a second aperture opposite the first aperture**, a socket, and **wherein the second aperture is covered by a piece that forms a bottom surface of the head that is opposite the top surface of the head** (emphasis added), all not disclosed as originally filed, and therefore constitutes new matter. Accordingly, being dependent on independent claim 96, all of claims 97-106 include new matter.

7. Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 54, "the second tooth cleaning element" lacks proper antecedent basis.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 5, 8, 9, 11, 37, 38 and 43-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 5-76416 (hereinafter Japan '416)

Japan '416 discloses in Fig. 2, for example, a toothbrush comprising a handle, a head extending from the handle, and a plurality of tufts 6, 6 of bristles extending from the head, each tuft of bristles being supported for rotation about only one axis, each tuft of bristles being rotatable independent of the other tuft(s) of bristles. Note, that notwithstanding the fact that Fig. 2 of Japan '416 shows **two tufts** of bristles on **each** "bearing" 5, one can pick and choose just a **single tuft** of bristles on **each** "bearing" 5 to meet the recited language of claim 1.

As for claim 5, each tuft includes at its non-brushing end a "bearing" 5 (Fig. 2) which is substantially cylindrical in shape in its major portion, each bearing being secured in its own hollow space within the head, each bearing allowing rotation of its respective tuft.

As for claims 8 and 44, a portion of the head is deemed to limit rotation or range of rotation of each tuft (Figs. 2, 3 and 5).

As for claim 9, the tufts are deemed capable of being rotated by contact with a portion of an oral cavity. Further, such a recitation can merely depend on how one holds or orients the toothbrush with respect to the oral cavity or how one manipulates the toothbrush itself during brushing.

As for claim 11, the axis about which each tuft is rotatable is substantially perpendicular to a long axis of the tuft (Fig. 2).



As for claim 37, Japan '416 discloses a toothbrush head 3 in Fig. 2, for example, comprising a plurality of first tooth cleaning elements (i.e., any one of the tufts) extending from the head and a second tooth cleaning element (i.e., any one of the other tufts/bristles) extending from the head, the first tooth cleaning elements being "different" from the second tooth cleaning element, and wherein the second tooth cleaning element extends from a socket and wherein the second tooth cleaning element is rotatably disposed within the socket. Here, the term "different" is being defined by the Examiner in a broader sense in that the "first" and "second" tooth cleaning elements are in **"different" locations or positions** from one another.

As for claim 38, there is a plurality of the second tooth cleaning elements.

As for claim 43 reciting that the second tooth cleaning element has a range of rotation of "less than about 60 degrees", the tufts clearly rotate "less than about 60 degrees" viewing Fig. 3 of Japan '416 (see phantom lines) since this would include 1 degrees, 2 degrees, etc.

As for claim 45, the head 3 further comprises a top surface and the top surface has an aperture (Fig. 2) and wherein the second tooth cleaning element extends from the aperture.

As for claim 46, **picking and choosing** a single row of tufts (i.e., along the longitudinal axis of the Japan '416 toothbrush head in Fig. 2), the plurality of first tooth cleaning elements and the plurality of second tooth cleaning elements are deemed alternately arranged adjacent an edge of the toothbrush head.

As for claim 47, the plurality of second tooth cleaning elements comprises "about 4".

As for claim 48, **picking and choosing** the two rows of tufts (i.e., along the longitudinal axis of the Japan '416 toothbrush head in Fig. 2), the plurality of first tooth cleaning elements and the plurality of second tooth cleaning elements are deemed alternately arranged adjacent two edges of the toothbrush head.

As for claim 49, Japan '416 teaches a toothbrush, comprising the toothbrush head of claim 37 and a handle 1 (Fig. 1) attached to the toothbrush head.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416.

As for claims 2 and 3 reciting the range of rotation of each tuft being a range of rotation of "about 60 degrees" or "about 30 degrees to either side of the vertical position", it appears that the tufts clearly rotate about 60 degrees or about 30 degrees to either side of the vertical position viewing Fig. 3 of Japan '416 (see phantom lines). Further, the tufts are capable of having a range of rotation of "about" 60 degrees or "about" 30 degrees to either side of the vertical position. Moreover, even assuming

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arguendo that the tufts do not have a range of rotation of about 60 degrees or about 30 degrees to either side of the vertical position, one skilled in the art would find it obvious to optimally choose such a claimed range or value for the purpose of enhancing brushing effectiveness such as in interproximal areas.

12. Claim 4, 12-19, 22-27, 29, 32, 33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in view of DE 198 17 704 (hereinafter DE '704).

Japan '416 discloses all of the recited subject matter as set forth above with the exception of at least one tooth cleaning element which cannot be rotated. DE '704 discloses in Figs. 1 and 2 a toothbrush comprising at least one tooth cleaning element 8 (Fig. 2) which cannot be rotated. It would have been obvious to one of ordinary skill in the art to have provided the Japan '416 toothbrush with at least one tooth cleaning element which cannot be rotated as taught by DE '704 to increase the overall brushing effectiveness of the toothbrush by permitting the cleaning of exterior tooth surfaces.

As for claim 12, Japan '416 teaches an apparatus in Figs. 2 and 3, for example, comprising a toothbrush head 3, and a first group of tooth cleaning elements extending from the head and a second group of a plurality of tooth cleaning elements extending from the head, the elements within each of the groups being of a common type (i.e., bristles) and the type of elements in the first group being "different" than the type of elements in the second group, and each of the elements in the second group is supported for rotation about only one axis and independently rotatable with respect to one another. Note, that notwithstanding the fact that Fig. 2 of Japan '416 shows **two**

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**tufts** of bristles on **each** "bearing" 5, one can pick and choose just a **single tuft** of bristles on **each** "bearing" 5 to meet the recited language of claim 12. Also, the term "different" here is being defined by the Examiner in a broader sense in that the "first" and "second" tooth cleaning elements are in "**different**" **locations or positions** from one another. Japan '416 discloses all of the recited subject matter as set forth above with the exception each element in the first group being nonrotatable. DE '704 discloses in Figs. 1 and 2 a toothbrush comprising at least one tooth cleaning element 8 (Fig. 2) which cannot be rotated. It would have been obvious to one of ordinary skill in the art to have provided the Japan '416 toothbrush with each element in the first group being nonrotatable as taught by DE '704 to increase the overall brushing effectiveness of the toothbrush by permitting the cleaning of exterior tooth surfaces.

As for claim 13, all of the tooth cleaning elements of the toothbrush, of the ones chosen, are in the first and second group.

As for claim 14, the first group includes a plurality of tooth cleaning elements.

As for claim 15, each of the elements in the second group is adjacent to at least one of the elements in the first group.

As for claim 16 reciting that the interproximal residence time of elements in the second group is about 1.6 times or greater than the interproximal residence time of the elements in the first group, such recitation is deemed merely functional and adds no further structural limitations to the claim. Further, such recitation is drawn more appropriately to a method step.

As for claim 17 reciting that the elements in the second group are longer than the

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elements in the first group, the secondary teaching to DE '704 teaches such an arrangement and it would have been obvious to one of ordinary skill in the art to have modified the length of the second group of elements such that they are longer than the first group of elements as taught by DE '704 for the purpose of improving the interproximal capabilities of the tooth cleaning apparatus.

As for claim 18, the elements in the second group appear to be typical plastic/nylon elements which are polymer.

As for claim 19, each of the elements in the second group is a tuft of bristles.

As for claim 22, there is a handle 1, and wherein the head 3 extends from the handle.

As for claim 23, the axis about which each element in the second group is rotatable is substantially perpendicular to a long axis of the element (Fig. 3).

As for claim 24, the elements in the first group are free of spring bias tending to rotate the elements after deflection.

As for claim 25, Japan '416 discloses in Fig. 2, for example, an apparatus comprising a toothbrush head and a plurality of tufts 6, 6 of bristles extending from the head, each tuft of bristles being supported for rotation about only one axis, each tuft of bristles being rotatable independent of the other tuft(s) of bristles. Note, that notwithstanding the fact that Fig. 2 of Japan '416 shows **two tufts** of bristles on **each** "bearing" 5, one can pick and choose just a single tuft of bristles on each "bearing" 5 to meet the recited language of claim 25. Japan '416 discloses all of the recited subject matter as set forth above with the exception of at least one tooth cleaning element

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which cannot be rotated. DE '704 discloses in Figs. 1 and 2 an apparatus comprising at least one tooth cleaning element 8 (Fig. 2) which cannot be rotated. It would have been obvious to one of ordinary skill in the art to have provided the Japan '416 apparatus with at least one tooth cleaning element which cannot be rotated as taught by DE '704 to increase the overall brushing effectiveness of the apparatus by permitting the cleaning of exterior tooth surfaces.

As for claims 26 and 27 reciting the range of rotation of each tuft being a range of rotation of "about 60 degrees" or "about 30 degrees to either side of the vertical position", it appears that the tufts clearly rotate about 60 degrees or about 30 degrees to either side of the vertical position viewing Fig. 3 of Japan '416 (see phantom lines). Further, the tufts are capable of having a range of rotation of "about" 60 degrees or "about" 30 degrees to either side of the vertical position. Moreover, even assuming arguendo that the tufts do not have a range of rotation of about 60 degrees or about 30 degrees to either side of the vertical position, one skilled in the art would find it obvious to optimally choose such a claimed range or value for the purpose of enhancing brushing effectiveness such as in interproximal areas.

As for claim 29, in Japan '416, each tuft includes at its non-brushing end a "bearing" 5 (Fig. 2) which is substantially cylindrical in shape in its major portion, each bearing being secured in its own hollow space within the head, each bearing allowing rotation of its respective tuft.

As for claim 32, a portion of the head is deemed to limit rotation of each tuft (Figs. 2, 3 and 5).

As for claim 33, the tufts are deemed capable of being rotated by contact with a portion of an oral cavity. Further, such a recitation can merely depend on how one holds or orients the toothbrush with respect to the oral cavity or how one manipulates the toothbrush itself during brushing.

As for claim 35, the axis about which each tuft is rotatable is substantially perpendicular to a long axis of the tuft (Fig. 2).

As for claim 36, the apparatus of Japan '416 further comprises a handle 1 (Fig. 1).

13. Claims 20 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in view of DE '704 as applied to claim 12 above, and further in view of Rauch 4,472,853 (hereinafter Rauch).

The patent to Rauch teaches a second group of elements being a fin (Fig. ; col. 3, lines 31-39) in a tooth cleaning apparatus. It would have been obvious to one of ordinary skill in the art to have provided the modified Japan '416 apparatus with a second group of tooth cleaning elements that are fins as taught by Rauch for providing a massaging effect to the tooth cleaning apparatus.

As for claim 21, each element of the first group is already a tuft of bristles.

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in view of Grusin 2,263,802 (hereinafter Grusin).

Japan '416 discloses all of the recited subject matter as set forth above with the exception of the head being made of at least two pieces which are joined together to secure the bearing within the head. The patent to Grusin teaches in Figs. 1, 3, 4 and 5 a toothbrush comprising a head 2 being made of at least two pieces 6, 7 which are joined together to secure a bearing within the head 2 (p. 1, col. 2, lines 20-28). It would have been obvious to one of ordinary skill in the art to have modified the Japan '416 head such that it is made of at least two pieces which are joined together as taught by Grusin to more securely clamp or secure the bearing within the head.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in Claim view of Hokett 2,486,847 (hereinafter Hokett).

Japan '416 discloses all of the recited subject matter as set forth above with the exception of a viscous substance being provided in each hollow space in the head to provide some resistance to rotation of the tufts. Hokett teaches the concept in Figs. 2 and 4 of providing for a viscous substance (e.g., liquid soap or oil as recited in col. 2, lines 30-32) being provided in the head which would provide some resistance to rotation to tufts 16. It would have been obvious to one of ordinary skill in the art to have provided the Japan '416 toothbrush with a viscous substance in the head as taught by Hokett provided in each hollow space which would provide some resistance to rotation of the tufts.



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16. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in view of DE '704 as applied to claims 25 and 29 above, and further in view of Grusin.

The patent to Grusin teaches in Figs. 1, 3, 4 and 5 a toothbrush comprising a head 2 being made of at least two pieces 6, 7 which are joined together to secure a bearing within the head 2 (p. 1, col. 2, lines 20-28). It would have been obvious to one of ordinary skill in the art to have provided the modified Japan '416 head with at least two pieces which are joined together as taught by Grusin to more securely clamp or secure the bearing within the head.

17. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '416 in view of DE '704 as applied to claims 25 and 29 above, and further in view of Hokett.

Hokett teaches the concept in Figs. 2 and 4 of providing for a viscous substance (e.g., liquid soap or oil as recited in col. 2, lines 30-32) being provided in the head which would provide some resistance to rotation to tufts 16. It would have been obvious to one of ordinary skill in the art to have provided the modified Japan '416 toothbrush with a viscous substance in the head as taught by Hokett provided in each hollow space which would provide some resistance to rotation of the tufts.

18. Claims 1, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Germany 1 210 409 (hereinafter Germany '409).

With respect to claim 1, Germany '409 discloses in Fig. 2, for example, a brush comprising a backing or "handle" 1, a "head" 2 extending from the handle, and a plurality of tufts of bristles (three tufts shown in Fig. 2) extending from the head, each tuft of bristles being supported for rotation about only one axis, each tuft of bristles being rotatable independent of the other tuft(s) of bristles.

As for claim 1 reciting a "toothbrush" in the preamble, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

As for claim 8, a portion of the head is deemed to limit rotation of each tuft.

As for claim 10, each tuft includes at its non-brushing end a living hinge 5, each living hinge 5 being "secured partially within the head", each living hinge allowing rotation of its respective tuft.

As for claim 11, the axis about which each tuft is rotatable is substantially perpendicular to a long axis of the tuft (Fig. 2).

19. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Germany '409.

As for claim 2 reciting the range of rotation of each tuft being a range of rotation of "about 60 degrees", it appears from Fig. 2 that the tufts clearly rotate "about" 60 degrees (see phantom lines). Further, the tufts are capable of having a range of rotation

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of "about" 60 degrees. Moreover, even assuming arguendo that the tufts do not have a range of rotation of about 60 degrees, one skilled in the art would find it obvious to optimally choose such a claimed range for the purpose of enhancing brushing effectiveness.

20. Claims 37 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by DE '704.

As for claim 37, DE '704 discloses a toothbrush head 1 in Fig. 2, comprising a plurality of first tooth cleaning elements 8 extending from the head and a second tooth cleaning element 6 extending from the head, the first tooth cleaning elements 8 being "different" from the second tooth cleaning element 6, and wherein the second tooth cleaning element 6 extends from a socket and wherein the second tooth cleaning element 6 is rotatably disposed within the socket. Here, the term "different" is being defined by the Examiner in a broader sense in that the "first" and "second" tooth cleaning elements 8, 6, respectively, are in **"different" locations or positions** from one another. Further, the "first" and "second" tooth cleaning elements 8, 6, respectively, are also of **"different" lengths**.

As for claim 39, the plurality of first cleaning elements 8 are non-rotatable.

21. Claims 37, 38, 40-42, 50-56, 61, 62, 75, 76, 78-80 and 84 are rejected under 35 U.S.C. 102(b) as being anticipated by Cyzer 3,129,449 (hereinafter Cyzer).

As for claim 37, Cyzer discloses a toothbrush head 1, 2 in Figs. 1 and 2, for example, comprising a plurality of first tooth cleaning elements 4 extending from the head and a second tooth cleaning element 4a extending from the head, the first tooth cleaning elements being "different" from the second tooth cleaning element, and wherein the second tooth cleaning element extends from a socket and wherein the second tooth cleaning element is rotatably disposed (col. 2, lines 44-51) within the socket. Here, the term "different" can be construed in a broader sense in that the "first" and "second" tooth cleaning elements are in **"different" locations or positions** from one another. Further, "different" can be also be met by Cyzer in that the first tooth cleaning elements are **larger** than the second tooth cleaning element 4a as can be clearly seen in Figs. 1 and 2 (col. 2, lines 19-21).

As for claim 38, there are a plurality of the second tooth cleaning elements.

As for claim 40, the second tooth cleaning element can comprise rubber which is an elastomer (col. 1, lines 40-44).

As for claim 41, in view of the second tooth cleaning element being a rubber staff as just recited above for claim 40, the second tooth cleaning element is in the form of a fin.

As for claim 42, the second tooth cleaning element further comprises a semi-spherical or vaulted bottom 6 serving as a bearing (col. 2, lines 23-24) that is disposed within the socket.

As for claim 50, Cyzer teaches a toothbrush head 1, 2, in Figs. 1 and 2, for example, comprising a top surface, a socket, a tooth cleaning element 4 or 4a extending

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from the top surface of the head, wherein the tooth cleaning element comprises an elastomeric (rubber as recited at col. 1, lines 40-44) first portion for contacting the teeth and a second portion 5 or 6, wherein the second portion is rotatably disposed (col. 2, lines 44-51) within the socket and wherein the first portion is formed separately from the second portion 5 and wherein the first portion is attached to the second portion (col. 2, lines 21-23).

As for claim 51, there is further a plurality of tooth cleaning elements (Fig. 1).

As for claim 52, the tooth cleaning element is in the form of a fin (i.e., rubber staff as recited at col. 1, lines 40-44).

As for claim 53, the second portion 6 is a semi-spherical or vaulted bottom serving as a bearing (col. 2, lines 23-24).

As for claim 54 reciting that the range of rotation of the "second" tooth cleaning element is less than "about 60 degrees", the "second" tooth cleaning element clearly rotates "less than about 60 degrees" since this would include 1 degrees, 2 degrees, etc.

As for claim 55, the range of rotation is limited by a portion of the head (Fig. 1).

As for claim 56, the top surface has an aperture and wherein the tooth cleaning element 4 or 4a extends from the aperture (Fig. 1).

As for claim 61 reciting that the second portion is formed by molding, it should be noted that such recitation is drawn to a method step which is not germane to patentability in apparatus claims.

As for claim 62, Cyzer teaches a toothbrush, comprising the toothbrush head of claim 50 and a handle 2' attached to the toothbrush head.

As for claim 75, Cyzer teaches a toothbrush head 1, 2 comprising a top surface comprising an aperture, and a tooth cleaning element 4 or 4a extending from the aperture, wherein the tooth cleaning element 4 or 4a comprises an elastomer (rubber as recited at col. 1, lines 40-44) and wherein the tooth cleaning element 4 or 4a is rotatably disposed (col. 2, lines 44-51) within a socket of the head.

As for claim 76, there is further a plurality of the tooth cleaning elements (Fig. 1).

As for claim 78, the tooth cleaning element is in the form of a fin (i.e., rubber staff as recited at col. 1, lines 40-44).

As for claim 79 reciting that the range of rotation of the "second" tooth cleaning element is less than "about 60 degrees", the "second" tooth cleaning element clearly rotates "less than about 60 degrees" since this would include 1 degrees, 2 degrees, etc.

As for claim 80, the range of rotation is limited by a portion of the head (Fig. 1).

As for claim 84, Cyzer teaches a toothbrush, comprising the toothbrush head of claim 75 and a handle 2' attached to the toothbrush head.

22. Claims 57-60, 77 and 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cyzer in view of DE '704.

Cyzer discloses all of the recited subject matter as set forth above with the exception of a plurality of second tooth cleaning elements that are non-rotatable and wherein the tooth cleaning elements and the second tooth cleaning elements are alternately arranged adjacent an edge of the toothbrush head and further where the plurality of second tooth cleaning elements comprises about 4. DE '704 discloses in

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Figs. 1 and 2 a toothbrush head comprising a plurality of "second" tooth cleaning elements 8 (Fig. 2) that are non-rotatable and wherein the tooth cleaning elements and second tooth cleaning elements are alternately arranged adjacent an edge of the toothbrush head and further wherein the plurality of second tooth cleaning elements comprises about 4 (Figs. 1 and 2). It would have been obvious to one of ordinary skill in the art to have provided Cyzer's toothbrush head with a plurality of "second" tooth cleaning elements that are non-rotatable and wherein the tooth cleaning elements and second tooth cleaning elements are alternately arranged adjacent an edge of the toothbrush head and further where the plurality of second tooth cleaning elements comprises about 4 as taught by DE '704 to increase the overall brushing effectiveness of the toothbrush by permitting the cleaning of exterior tooth surfaces and improving overall brushing stimulation to the teeth and gums of a user.

As for claim 60 reciting that the plurality of first tooth cleaning elements and the plurality of second tooth cleaning elements are alternately arranged adjacent two edges of the toothbrush head, such an arrangement is deemed obvious to one of ordinary skill for simply providing for a wider brushing surface area and increasing the overall brushing and massaging effect to the teeth and gums of a user. It should be noted that Cyzer already teaches in Fig. 2 rows of tooth cleaning elements 4a, 4a which are adjacent two edges of the toothbrush head.

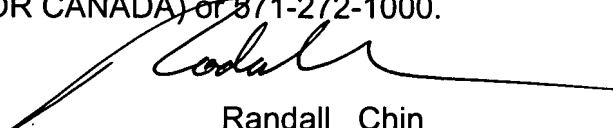
23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randall Chin whose telephone number is (571) 272-

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1270. The examiner can normally be reached on Monday through Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Randall Chin  
Primary Examiner  
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